

1 What is claimed is:

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3 1. A distance measuring device (10), in particular a handheld laser distance
4 measuring device, with a position sensor (22) for determining the spacial
5 orientation of the distance measuring device,
6 wherein the position sensor (22) is connected with a signal transducer (12, 28,
7 30, 32), whereby the signal transducer (12, 28, 30, 32) is capable of being
8 triggered by the position sensor (22) to emit a perceptible signal which depends
9 on the spacial orientation.

10
11 2. The distance measuring device as recited in Claim 1,
12 wherein the signal transducer is an optical signal transducer (12, 30), an acoustic
13 signal transducer (28) or a tactile signal transducer (32).

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15 3. The distance measuring device as recited in Claim 2,
16 wherein the optical signal transducer (12, 32) is capable of being triggered by the
17 position sensor (22) to emit an optical signal, the intensity, color, brightness,
18 blinking frequency (f) and/or blinking duration of which are a function of the
19 spacial orientation.

20
21 4. The distance measuring device as recited in Claim 2 and/or Claim 3,
22 wherein the optical signal transducer is a laser (12) that emits light in the visible
23 wavelength range.

24
25 5. The distance measuring device as recited in Claim 4,
26 wherein the optical signal transducer is a laser (12) which serves to measure
27 distance.

28
29 6. The distance measuring device as recited in at least one of the Claims 2
30 through 5,

1 wherein the acoustic signal transducer (28) is capable of being triggered by the
2 position sensor (22) to emit an acoustic signal, the volume, pitch, frequency of
3 recurrence (f) and/or duration of which are a function of the spacial orientation.
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5 7. The distance measuring device as recited in at least one of the Claims 2
6 through 6,

7 wherein the tactile signal transducer (32) is capable of being triggered by the
8 position sensor (22) to emit a tactile signal, the impact strength and/or frequency
9 of recurrence (f) of which is a function of the spacial orientation.
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11 8. The distance measuring device as recited in at least one of the previous
12 claims,
13 wherein the position sensor (22) is a tilt sensor.
14

15 9. The distance measuring device as recited in at least one of the previous
16 claims,
17 wherein, to trigger the signal transducer (12, 28, 30, 32) as a function of the
18 spacial orientation, a control unit (24, 26, 26', 26'', 26''', 14) is provided which is
19 connected with the position sensor (22) on the input side and with the signal
20 transducer (12, 28, 30, 32) on the output side.
21

22 10. The distance measuring device as recited in Claim 9,
23 wherein the control unit (24, 26, 26', 26'', 26''', 14) includes a comparator unit
24 (24) to compare a signal emitted by the position sensor (22) with a specified
25 limiting value and, as a function of the comparison, to generate a control signal
26 (f) for triggering the signal transducer (12, 28, 30, 32).